

METHODS AND APPARATUS FOR RECOGNIZING AND REACTING TO DENIAL OF SERVICE ATTACKS ON A COMPUTERIZED NETWORK

Abstract of the Invention

The invention refers to a procedure for recognizing and refusing attacks on server
5 systems of network service providers and operators by means of an electronic intermediary
device (4) installed on a computer network. This electronic intermediary device operates a
computer program as well as a data carrier to realize the advantaged of the present invention. In
addition, the present invention applies to any computer system connected to a network such as
Internet (6), an intranet, a virtual private network and the like, regardless whether such network
10 contains just one computer or many computers configured as a server computer (2) or as a client
computer and also applies to a computer program product containing computer codes for
recognizing and refusing attacks on server systems, and provides:

- defense against DoS and DDoS attacks (flood attacks)
- link level security,
- examination of valid IP headers,
- examination of the IP packet,
- TCP/IP fingerprint protection,
- blocking of each UDP network packet,
- length restrictions of ICMP packets,
- exclusion of specific external IP addresses,
- packet-level firewall function, and
- protection of reachable services of the target system.

The present invention thus guarantees a high degree of security and protection against DoS and
DDoS attacks.